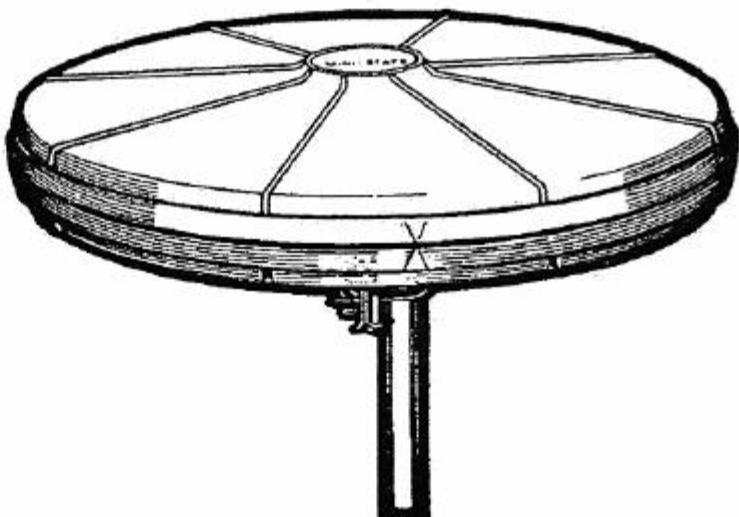


Shakespeare®

SINCE 1897

SeaWatch®

OWNER'S MANUAL



AMPLIFIED UHF/VHF TV ANTENNA
for Indoor-Outdoor Home & Recreational Use

STYLE 2040 TV ANTENNA

SAFETY Instructions

1. Read Instructions ————— All safety and operating instructions should be read before the antenna is installed and operated.
2. Heed warnings ————— All warnings on the antenna and in the operating instructions should be adhered to.
3. Power sources ————— The antenna should be connected to a power supply only of the type described in the operating instructions or as marked on the antenna.
- 4 . Power cord protection ————— Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the antenna.
5. Power Lines ————— An outdoor antenna should be located as far away from power lines as possible.
6. Nonuse periods ————— The power cord of the antenna should be unplugged from the outlet when left unused for a long period of time.
7. Damage requiring service ————— The antenna should be serviced by qualified service personnel when:
 - a. The power supply cord has been cut or damaged; or
 - b. The antenna has been dropped, or the enclosure is damaged; or
 - c. The antenna does not appear to operate normally or exhibits a marked change in performance.
8. Antenna grounding ————— Make sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
9. Servicing ————— The user should not attempt to service the antenna beyond that described in the operating instructions. If you feel the antenna needs repair, please contact the Shakespeare Service Department at: 1-800-800-9008.

Description

The SeaWatch 2040 is a complete TV antenna system designed for use in the marine environment. The system features a unidirectional antenna, special solid state amplifier, and an electrical rotating mechanism, all housed inside a patented weather-resistant plastic "radome." The remote control power supply is designed to operate from 12 VDC or 120 VAC.

Items Supplied

The following items are included in the SeaWatch 2040 TV antenna system:

- (1) Radome unit with VHF and UHF antennas, amplifier, and rotator
- (1) Rotator control unit with 8' cable
- (1) 12 VDC/120 VAC power supply unit
- (1) 30' combination coaxial / 3-wire rotator cable
- (1) Mounting hardware
- (1) Mast mount

Caution:

Do not plug your power supply into a 120-volt outlet until all electrical and antenna connections have been made.

Doing so may short out the power supply transformer and void the warranty

Caution: During the installation of the SeaWatch 2040 antenna, make sure the antenna and mast cannot accidentally come in contact with any power line. CONTACT WITH POWER LINES COULD RESULT IN SERIOUS INJURY OR DEATH!

Antenna Installation for Boats

For best performance on a boat, the 2040 antenna should be mounted as high as practical and as far away from metal objects as possible. If the interior areas of the boat are substantially enclosed or surrounded by metal surfaces, an exterior mounting location must be selected. For boats with metal roofs, the antenna should be mounted at least six inches above the roof surface. Best reception will normally be obtained if the antenna is mounted above the boat's highest deck or cabin structure.

It is possible that mounting locations other than those mentioned above will provide satisfactory reception. It is recommended that several be tried to find the one that provides optimum performance before permanent installation is made.

Coaxial Cable / Rotator Wire Connections

Caution: Be sure the center conductor of the coax is in the hole of the connector before tightening the "F" connector!

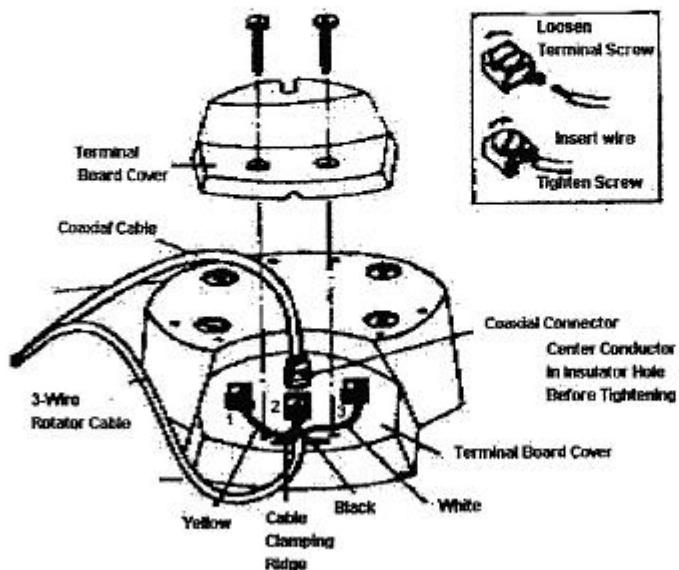


Fig. 1 Connections to Antenna Terminal Board

Mounting Position

For proper operation, the antenna must always be mounted with the radome in a horizontal position. In exposed outdoor locations, it should be mounted with its top side up.

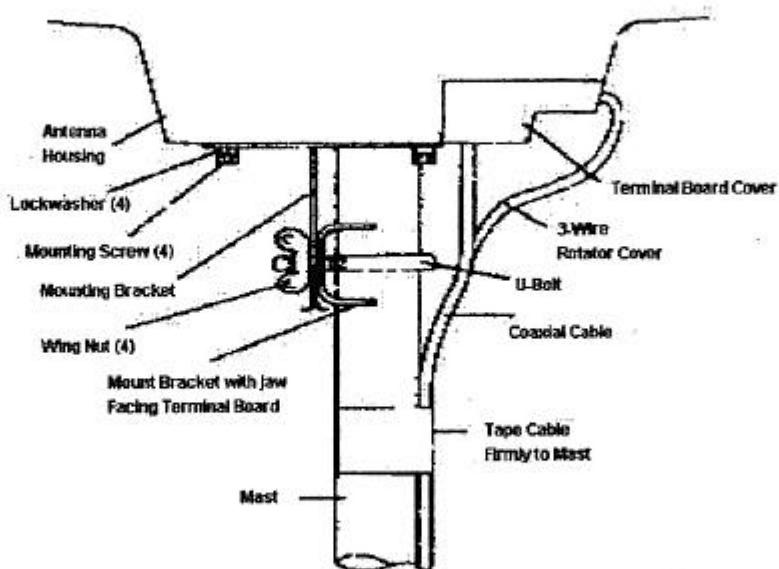


Fig. 2 Mast Mounting

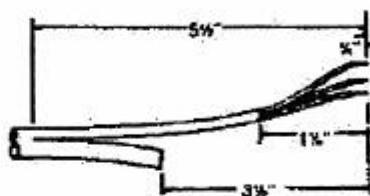
Note:

Do not attempt to unscrew the metal inserts because these hold the internal mechanism in place.

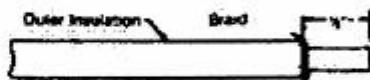
Cable Installation

Tape the combination coaxial / 3-wire rotator cable to the mast as shown in Fig.2. Run the cable to the TV set location, securing it every 3 or 4 feet with suitable cable clamps or U-shaped staples. Clamps or staples should not press tightly against or cut through the cable. Excessive bending of the cable may weaken the TV signal.

Step 1: Separate coaxial and rotator cables for a length of $5\frac{1}{2}$ ". Strip back outer insulation from 3 rotator leads $1\frac{1}{2}$ " from ends. Strip inner insulation from ends exposing $\frac{1}{8}$ " bare wire.



Step 2: Cut coaxial cable $3\frac{1}{2}$ " shorter than rotator cable.

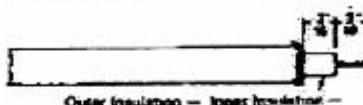


Step 3: Remove $\frac{1}{8}$ " inch of outer insulation.

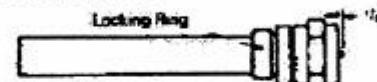
Step 5: Cut off exposed aluminum foil.

Step 4: Comb braid out straight. Bend back and cut short as shown.

Step 6: Remove $5/16$ inch of inner insulation. Take care not to nick center conductor.



Step 7: Insert prepared end of cable into connector until center conductor protrudes approximately $\frac{1}{8}$ inch as shown. (Caution: Do not allow the inner insulation to protrude into the connector's threaded section.)



Step 8: Using a crimping tool or a pair of pliers as shown, crimp the connector locking ring.



Figure 3. Installation of Connector to Shortened Cable

The cable requires a $13/32$ " diameter hole to pass through a wall or floor. To make it easier to insert the cable through the hole, fold the rotator cable back against the coaxial cable so that the coaxial connector goes through the hole first.

Power supply installation

The power supply provided with the 2040 may be operated from either a 120-volt AC or 12-volt DC power source. These two voltages may be applied separately or simultaneously.

Caution:

The 12VDC circuitry of the 2040 is designed to operate only with common negative ground systems. Use with positive ground systems will result in costly damage to the unit.

The power supply also serves as a junction box for cable connections. It can be mounted to the back of the TV set or to any flat surface behind the set.

Coaxial Cable / 3-wire Rotator Wire Connections (Fig.4)

Attach the coaxial connector to the threaded receptacle on the power supply unit, using care to center the inner conductor in the hole before tightening the nut. Slip the rotator cable through the strain relief clamp. Connect the yellow wire to Terminal 1, the black wire to Terminal 2, and the white wire to Terminal 3. Insert the 5-pin control unit plug into the matching 5-pin receptacle on the power supply.

If the TV set is "Cable ready", the coaxial cable "F" connector may be attached directly to the TV. If the TV is not "Cable ready" an optional band separator must be used.

12-Volt DC Operation

The DC power cord supplied with the system contains an in-line protective fuse.

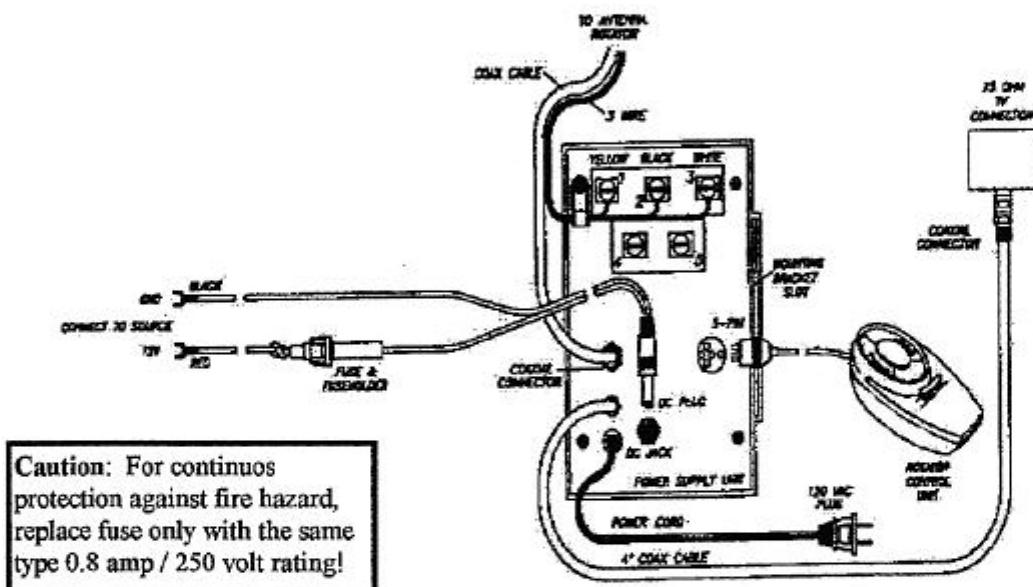
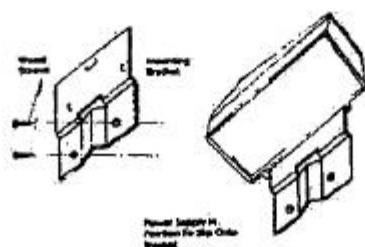


Figure 4. System Interconnections

Insert the plug of the power cord into the mating DC jack on the power supply unit. Attach the red wire to the positive terminal and the black wire to the negative terminal of the DC source used. The power cord is supplied with spade lugs which may be easily removed if your installation requires another type of connector. Attach the mounting bracket to any convenient flat surface and position the power supply as shown in Fig.5.

120-Volt AC Operation

Insert the power cord into the nearest 120-volt AC outlet. The cord may be left plugged in at all times since the amount of standby power used is very small; about the same as that of an electric clock. The DC power source, if installed, may also be left plugged in. The unit will operate from either or both sources.



Antenna Operation

With the TV on and a station tuned in, rotate the antenna by pressing the rocker switch located on the control unit. Pressing the right side of the switch will turn the antenna in a clockwise direction. Pressing the left side will turn it counterclockwise. Although the actual antenna movement cannot be seen, the indicator arrow on the control unit will light, showing the direction of antenna rotation.

When the antenna has made one full turn (260 degrees), the End of rotation light will come on.

Observe the picture while rotating the antenna first in one direction and then the other, until the best picture quality is obtained.

Troubleshooting

<u>Symptom</u>	<u>Probable Cause</u>
Antenna will not rotate; direction indicator lamps do not light.	A. Power cord not plugged in B. No voltage to power supply C. Defective D1 in power supply D. Defective voltage regulator
Antenna will not rotate; at least one direction indicator lights properly	A. 3-wire rotator cable open or incorrectly connected B. Defective motor C. Defective end stop switch
Antenna at end stop; will not rotate	A. End stop switch defective B. End stop diodes D1 or D2 defective
Antenna rotating in wrong direction; Left direction indicator flashes when Right button is pressed, etc.	A. Control cable connections 1 and 3 are reversed
Weak picture; no noticeable difference in picture when antenna is rotated	A. Defective amplifier transistor B. Open connection between antenna and amplifier C. Open or shorted coaxial lead-in cable D. Shorted or open amplifier coax wrap- around cable inside antenna housing E. Defective power supply

Note:

With amplifier and power supply properly connected, voltage between RFC1 and ground should be approximately 10 volts DC. Very low or zero voltage may indicate a shorted C1, C4, or C5 capacitor, shorted coaxial cable, or a short on the amplifier board.

Warning: Installation of this product near power lines is dangerous. For your safety, follow the installation directions. In accordance with the recommendations of the U.S. Consumer Product Safety Commission.

Follow these rules and live:

1. Perform as much antenna assembly on the ground as possible.
2. Watch out for overhead power lines. Check the distance to the power lines before you start installing -We recommend you stay a minimum of twice the maximum length of the antenna assembly away from all power lines.-
3. Do not use a metal ladder.
4. Remember, even the slightest touch of an antenna to a power line can cause a fatal shock.
5. Don't try to do the job on a windy day.
6. Have a friend as a spotter when you're on the roof, they can see things you can't.
7. If you start to drop an antenna, get away from it and let it fall.
8. If any part of the antenna should come in contact with a power line - Call your local power company; don't try to remove it yourself! They will remove it safely.
9. Mast, lead-in and metal guy wires are all excellent conductors of electrical current. Keep them away from power lines too.
10. Be sure family and friends understand the danger of touching an overhead power line. Tell them never to try to remove any object in contact with a power line - CB, TV antenna or anything else.
11. Make sure that the antenna mast assembly is properly grounded.

General Installation Instructions For Mast Mounted Antennas

1. Assemble your new antenna on the ground at the installation site. Keep separate assembly instructions that come with it.
2. On the ground, clamp the antenna to the mast, pull enough TV lead-in and connect to antenna.
3. To insure that a mast does not fall the "wrong way" if it should get away during installation or takedown, durable non-conductive rope should be secured at each ten foot level as the mast is raised. The boss stands in a position where he can yank or pull the ropes if the need arises to deflect the falling mast away from hazards (such as power lines) into a "safe fall" (such as a yard or driveway). The ropes are tied taut at the base of the mast after installation and in place at the various levels.
4. Install selected mounting brackets.
5. If you are going to use a guy wire installation instead of a mounting bracket:
 - Install guy anchor bolts
 - estimate length of guy wire and cut
 - attach to mast using guy ring
6. Carefully take antenna and mast assembly to mounting bracket and insert. Tighten clamp bolts. In case of guyed installation, it will be necessary to have at least a second person hold the mast upright while the guy wires are attached and tightened to the anchor bolts.
7. Install self-adhering "Danger" label package in antenna hardware kit.

If an accident should occur with power lines

1. Don't touch the person in contact with the antenna and power line, or you too may be electrocuted.
2. Use a dry board, stick, or rope, to push or pull the victim away from the antenna.
3. If the victim has stopped breathing, administer artificial respiration until help arrives.
4. Have someone call for medical help.

Recommended by the National Consumer Product Safety Council

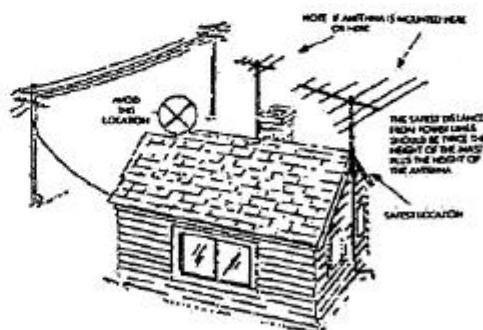
Where to install your antenna (site selection)

Before attempting to install your antenna, think where you can best place your antenna for safety and performance.

To determine a safe distance from wires, power lines, and trees.

1. Measure the height of your antenna.
2. Add this length to the length of your tower or mast, and then
3. Double this total for the minimum recommended safe distance.

If you are unable to maintain this safe distance, STOP! Get professional help. Most antennas are supported by pipe masts attached to the chimney, roof, or side of a house. Generally, the higher the antenna is above ground, the better it performs. Good practice is to install your vertical antenna about 5 to 10 feet above the roof line and away from power lines and obstructions. Remember that the FCC limits your antenna height to 60 feet. If possible, find a mounting place directly above your set, where the antenna wire can take a short, vertical drop on the outside of the house for entry through a wall or window near the set. Your dealer carries a complete line of installation hardware.



Dos and Don'ts for installing Antennas

If you're not sure about a careful, safe installation, - don't try to do it yourself. Call for professional help.

Measure the maximum length of the antenna and mast assembly and then stay at least twice that distance away from power lines.

For mast support, use only 1 1/4" diameter or larger antenna mast sections. Lengths over 10 feet should be guyed at least each 10 foot section.

LIMITED WARRANTY

STYLE 2040 TV ANTENNA

KEEP FOR YOU RECORDS

Shakespeare warrants that if anything goes wrong with your antenna within one year of date of purchase, and it is our fault, we will repair the unit or replace it at no cost.

This warranty excludes all costs arising from installation, removal, reinstallation or set-up, transportation to and from the dealer, and damage due to misuse or neglect.

In addition indirect, incidental, or consequential damages are not covered. Some states do not allow the exclusion or limitation of indirect, incidental, or consequential damages, so the above limitation may not apply to you.

To obtain warranty service, please do the following:

1. Take the unit to the dealer from which it was purchased or any Shakespeare antenna dealer.
2. Present your bill of sale or other evidence of the date on which the unit was first purchased.

It is necessary that you retain your bill of sale or proof of purchase in order to obtain warranty service.

Out-of-warranty repair service

In the event your antenna should fail after the 1 year limited warranty period, Shakespeare will either repair the non-functioning unit, or replace it with a remanufactured unit. The cost of repair or replacement shall not exceed \$69.95 unless you are otherwise notified. The unit will be returned C.O.D.

When returning the unit for repair, package unit properly to prevent damage and ship prepaid to:

Shakespeare Co.
19845 US. Hwy. 76
Newberry, SC. 29108
Attn.: Service

Shakespeare®

SINCE 1897

19845 US. Hwy. 76, Newberry, SC. 29108
Phone: (800) 800-9008 Fax: (803) 276-8940